

Bio12-Q1W4-Test1 Revision on Cytology

Multiple Choice

Identify the choice that best completes the statement or answers the question.

- ____ 1. Which of the following organisms do not have cell walls?
- plants
 - fungi
 - bacteria
 - animals
- ____ 2. All living things are made up of ____.
- cells
 - cork
 - wastes
 - cellulose
- ____ 3. If a cell contains a nucleus, it must be a(n) ____.
- plant cell
 - eukaryotic cell
 - animal cell
 - prokaryotic cell
- ____ 4. In a chloroplast, the stacks of membranous sacs are called ____.
- stroma
 - grana
 - plastids
 - thylakoid membrane
- ____ 5. Because cells have a watery environment both inside and outside, the polar ends of the phospholipids in the plasma membrane form ____ layers
- several
 - mosaic
 - double
 - single
- ____ 6. The fluid mosaic model describes a structure with ____.
- polar layers on the outside and nonpolar layer on the inside
 - nonpolar layers on the outside and a polar layer on the inside
 - polar layers on both inside and outside
 - nonpolar layers on both inside and outside
- ____ 7. Which of the following might be a result of a disease that causes a thickened plasma membrane?
- increased movement of molecules entering the cell
 - decreased movement of molecules within the cell
 - decreased movement of molecules entering the cell
 - increased movement of molecules leaving the cell
- ____ 8. A cell's contents would be the same as its surrounds, were it not for ____.
- plasmolysis
 - selective permeability
 - phagocytosis
 - dynamic equilibrium
- ____ 9. A plasma membrane is made up of a(n) ____.
- cholesterol layer
 - enzyme bilayer
 - lipid bilayer
 - protein layer
- ____ 10. Which is not a way that Figure 7-2 is a model of cellular theory?

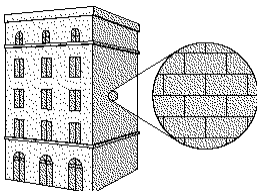


Figure 7-2

- bricks are small units in a building
- bricks are solid
- there are many bricks in a building
- bricks are organized to make a larger unit

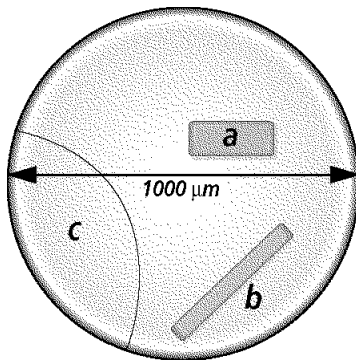


Figure 7-3

- ____ 11. What would be the best way to estimate the size of C in Figure 7-3?
- a. increase magnification
 - b. decrease magnification
 - c. estimate by what you can see
 - d. assume it is 2000 μm

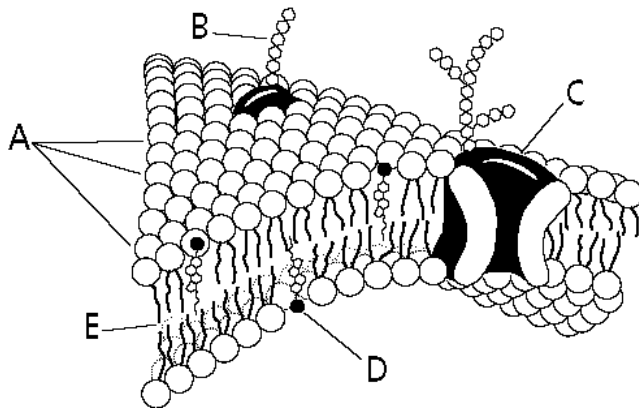


Figure 7-4

- ____ 12. What would happen to the structure in Figure 7-4 if part D is completely removed?
- a. it would become solid
 - b. it would disintegrate
 - c. it would have holes in it
 - d. it would collapse in on itself
- ____ 13. Where are you least likely to find water in the structure shown in Figure 7-4
- a. A
 - b. B
 - c. C
 - d. E

14. Which of the following pictures in Figure 7-5 most likely approximate the motion phospholipids make in a plasma membrane?

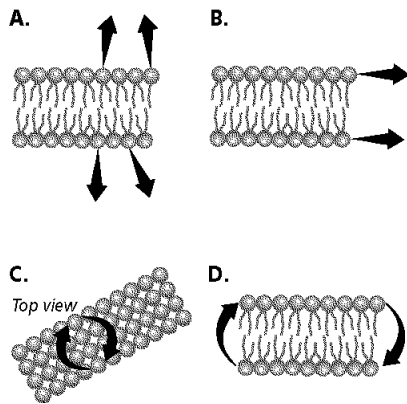


Figure 7-5

- | | |
|------|------|
| a. A | c. C |
| b. B | d. D |

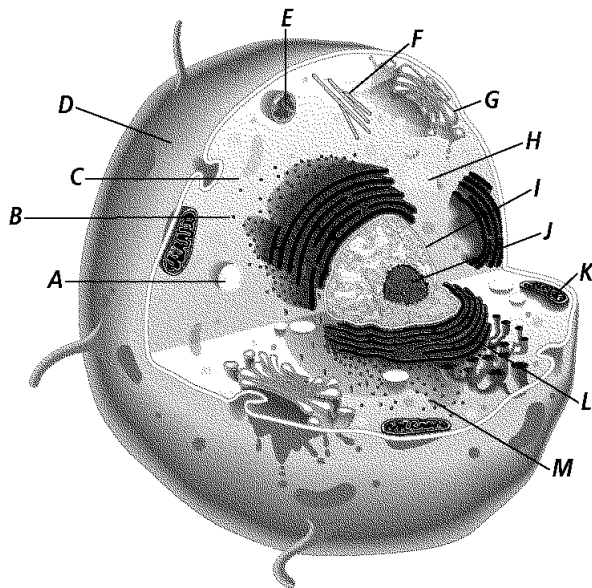


Figure 7-6

- | | | |
|---|------------|------------|
| 15. Which structure in Figure 7-6 is the cell control center? | a. A | c. I |
| | b. G | d. M |
| 16. Which structure in Figure 7-6 maintains homeostasis? | a. B | c. H |
| | b. D | d. L |
| 17. Which structure in Figure 7-6 transforms energy? | a. C | c. J |
| | b. G | d. K |
| 18. Which parts of Figure 7-6 are in a prokaryotic cell? | a. D and M | c. C and J |
| | b. A and K | d. G and L |

- ____ 19. Water moves into a cell placed in a(n) ____ solution.
- a. osmotic
 - b. hypertonic
 - c. hypotonic
 - d. isotonic
- ____ 20. If cells are placed in a strong sugar solution, water will ____.
- a. pass from the sugar solution to the cells
 - b. pass from the cells to the sugar solution
 - c. stay in the cell
 - d. pass back and forth
- ____ 21. A cell moves particles from a region of lesser concentration to a region of greater concentration by ____.
- a. facilitated diffusion
 - b. passive transport
 - c. osmosis
 - d. active transport
- ____ 22. If a cell is placed in salt water, water leaves the cell by ____.
- a. osmosis
 - b. diffusion
 - c. active transport
 - d. phagocytosis
- ____ 23. The causes of cancer may include which of the following?
- a. environmental influences
 - b. UV radiation
 - c. viruses
 - d. all of the above
- ____ 24. Which of the following monitors a cell's progress from phase to phase during the cell cycle?
- a. a series of enzymes
 - b. microtubules
 - c. lipid molecules
 - d. protein molecules
- ____ 25. If the sides of a cell double in length, its volume increases by ____ times.
- a. two
 - b. four
 - c. six
 - d. eight
- ____ 26. If the sides of a cell double in length, its surface area becomes ____ times as large.
- a. two
 - b. four
 - c. six
 - d. eight
- ____ 27. Among the following, the term that includes the others is ____.
- a. interphase
 - b. nuclear division
 - c. mitosis
 - d. cell cycle
- ____ 28. Unlike plant cells, animal cells contain ____.
- a. cell walls
 - b. centrioles
 - c. nucleoli
 - d. spindles
- ____ 29. The longest phase of the cell cycle is ____.
- a. prophase
 - b. interphase
 - c. metaphase
 - d. mitosis
- ____ 30. A chromatid is attached to a spindle fiber by the ____.
- a. nucleolus
 - b. deep furrow
 - c. centromere
 - d. centriole
- ____ 31. Which of the following structures is the most complex?
- a. cell
 - b. organ system
 - c. organ
 - d. tissue

32. What cell process is responsible for the effect shown in Figure 8-5?

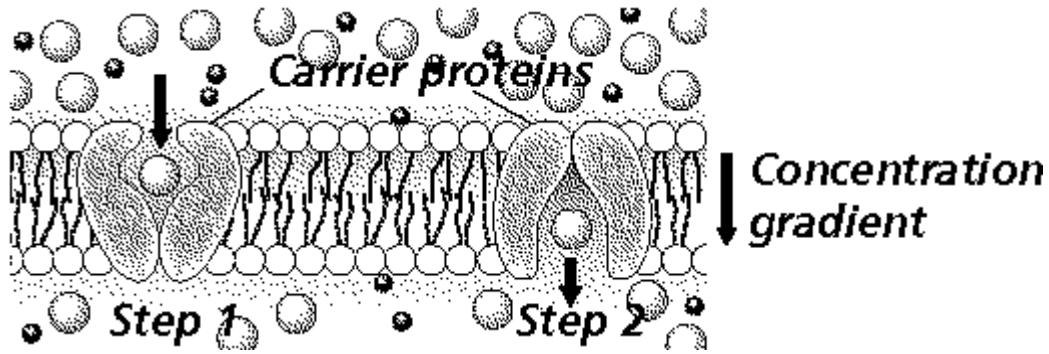


Figure 8-5

- a. active transport
- b. passive transport
- c. facilitated diffusion
- d. osmosis

33. The chromosomes shown in Figure 8-6 are in which state of mitosis?

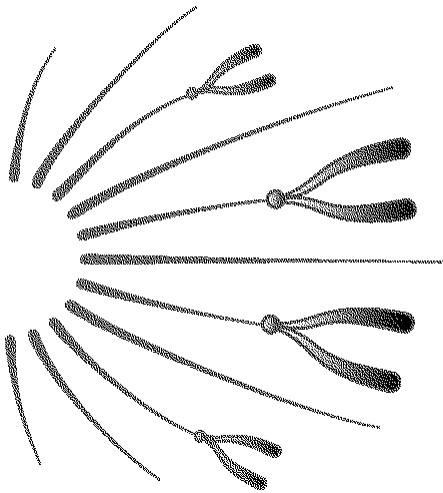


Figure 8-6

- a. prophase
- b. metaphase
- c. anaphase
- d. telophase

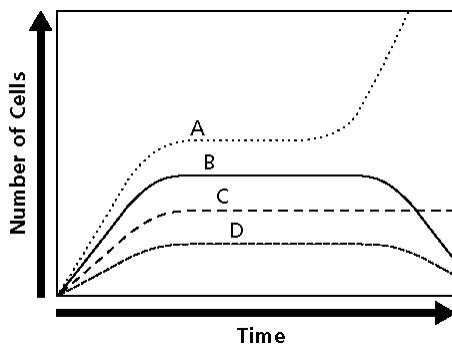


Figure 8-8

34. Which of the cells depicted in the line graph in Figure 8-8 are most likely cancerous?

- a. A
- b. B
- c. C
- d. D

- ____ 35. If cancer is present, what is the likely explanation for what happened to cells B and D?
- a. they thrived with the cancerous cells
 - b. they were harmed by radiation therapy
 - c. they died off on due to natural causes
 - d. they died off because the cancerous cells deprived them of nutrients

Matching

Match each item with the correct statement below.

- | | |
|---------------|------------------------|
| a. exocytosis | d. isotonic solution |
| b. gene | e. osmosis |
| c. diffusion | f. hypertonic solution |
- ____ 36. movement of particles from an area of higher concentration to one of lower concentration
- ____ 37. the concentration of dissolved substances outside the cell is higher than the concentration inside the cell
- ____ 38. the concentration of dissolved substances in the solution is the same as the concentration of dissolved substances inside the cell
- ____ 39. diffusion of water molecules through a selectively permeable membrane
- ____ 40. release of wastes or cell products from inside to outside a cell

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